Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

LIBRARY
OCT 20 1930
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 4 1930

REPORT FOR THE WEEK ENDING OCTOBER 4, 1930.

JUDITH BASIN:

Light showers fell the fore part of the week but the total amount of precipitation was not sufficient to benefit the winter wheat. The winter wheat seeded on fallow and on the green manure plots has emerged to good stands and is making a good growth for this time of the year. In the continuous cropping series only fair stands were obtained on the continuously cropped plots while on disked corn ground the stands of wheat are very poor. Fallow fields that have been kept free from weeds during the summer are fairly well supplied with moisture and the winter wheat seeded on such land should go through the winter in good shape.

The garage which is being constructed on the station has been completed and a number of the buildings are receiving a coat of paint.

Maximum temperature 76; minimum 32; precipitation, .09 inch.

HUNTLEY:

The fore part of the week was warm and bright but the last three days have been damp and cloudy. Two measurable showers have been received and much of the time the weather has been foggy or misty.

Winter wheat is beginning to come up on fallowed land but as yet practically none is visible on corn land or green manure treatments. There is more or less wheat showing on stubbled land but most of it appears to be volunteer spring wheat and the percentage of sown winter wheat is very low. Good stands of winter rye are present in the green manure rotations and on the pasture plots.

Tame grasses and alfalfa are making a heavier growth this fall than has been the case for several years. Much of this material was thought to have been killed out by the summer's drought but from present indications the loss from drought was slight.

Maximum temperature 80; minimum 34; precipitation, .23 inch.

DICKINSON:

Mild temperatures continued with a few days of threatening weather with only a light shower on the night of October 3.

Root crops were dug early in the week. All yields were very low due to the dry season.

Husking of corn on the rotations was started. The continuously cropped plots and the corn on fallow have fair yields but most all other methods have a very light yield of grain.

The last of the Virginia crabs were picked October 1, ending the fruit harvest for the season.

Visitors included Mr. Frank Rabak, Associate Biochemist, Drug and Related Plants, U.S. Department of Agriculture.

September precipitation amounted to 1.52 inches. For the six months April to September, inclusive, the precipitation amounted to 9.55 inches, which is 2.53 inches below the 38-year average at Dickinson for these six months.

Maximum temperature 72; minimum 20; precipitation, .19 inch.

MANDAN:

Agronomy

The past week has been somewhat rainy but the temperatures have not fallen much below freezing.

Practically all field work for the season is completed except corn husking.

Winter wheat and winter rye are up to good stands. Some fall seedings of crested wheat grass have come up with a good stand.

The total rainfall for September was 2.56 inches. The 55-year average for this area is 1.32 inches. The total precipitation for the year to the end of September is 14.27 inches as compared with the 55-year average of 14.79 inches.

Maximum temperature 69; minimum 24; precipitation, .73 inch.

Mandan, continued:

Cooperative Grazing Experiment

The steers put on good gains during September in the larger pastures where they had plenty of feed. The 50-acre steers lost weight as their pasture was grazed down very close. They were moved to the reserve. The rotation pasture was grazed close so the steers lost some weight. The steers in the 10-acre brome-grass pasture had all new-growth grass to eat. While they had plenty of feed the grass did not seem to fulfill their needs. The 30-acre steers made a high gain as they were on the reserve pasture with plenty of feed after grazing a short pasture all summer. The pastures still show a lot of green grass which is most unusual for this time of year.

The following table shows the gains of the cattle:

Pasture	No. of Steers	Gain per head. (lbs) Sept.	130 days
100-acre	10	47.5	285.0
70-acre	10	45.0	288.5
50-acre	10	-42.0	148.0
30-acre	10	99.0 *	184.5
Rot. (70-acre)	14	-15.0	206.4
Brome (25-acre)	8	56.3 **	266.9
" (10-acre)	5	-18.0 ***	159.0

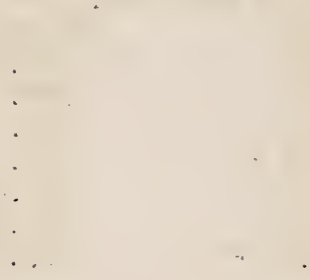
* On reserve pasture in September.
** Had access to 15-acre native pasture in addition to brome-grass.
*** One steer lost 90 pounds.

Unless the remaining grazing period continues very favorable the steers will show gains below normal for the season.

Arboriculture

Seed of Buffalo berry and Wild plum has been washed preparatory to stratifying.

The plowing of nursery tree stock has commenced in the northwest poplar field.



Mandan, continued:

Visitors of the week included Frank Rabak, Drug and Related Plants Investigations, Washington, D. C., and Dr. A. C. Hildreth, Mr. M. F. Babb, and Mr. J. L. Emerson, of the Cheyenne, Wyoming, Field Station.

BELLE FOURCHE:

The weather has been cool and cloudy most of the week, and a very light drizzling rain has fallen almost continuously during the past three days. The rain was badly needed for dry land winter wheat but will make the harvesting of sugar beets on the irrigation project much more difficult.

A total of .31 inch precipitation was received in September, which is 1.23 inches below the 22-year average and is third to the lowest on record for September. The total precipitation received during the growing season, April to September, inclusive, was 3.81 inches below normal, and from January to September, inclusive, the precipitation was 4.48 inches below the 22-year average for the 9-month period.

Owing to lack of moisture in the surface soil, winter wheat is coming up very slowly on summer fallowed land, and only a partial stand has been secured to date. On all other cultural treatments the soil has been too dry for any of the fall seeded grain to germinate, but the present beneficial rains should permit good stands of winter wheat and winter rye to be obtained on the various plots.

Maximum temperature 75; minimum 36; precipitation, .67 inch.

ARDMORE:

The rainfall for the first three days of October exceeded the highest total ever recorded for the month as a whole. Most of the rain fell slowly enough to be absorbed into the soil, though there was some runoff. The amount of runoff in the pastures was not large enough to fill the water holes, though a small amount of water collected in some of them. The rain of 1.60 inches on October 1 was the largest rainfall in twenty-four hours since August, 1926.

Ardmore, continued:

Field work during the week consisted of diking plots in Field 20, and completing fall plowing of grain stubble in the variety test.

No severe frost damage has been experienced as yet. Maximum temperature 75; minimum 35; precipitation, 2.81 inches.

ARCHER:

The weather during the last two and one-half days has been rainy. During the night of October 2 there was .63 of an inch of precipitation and this morning .78 of an inch was recorded. The fore part of the week was dry and the temperatures were mild with low wind velocity.

The latter conditions were favorable for field work which consisted of threshing and putting up silage. The silage work was finished for the season. There remains about one-half day of threshing. During the rainy weather the granary was fitted for the storage of seed corn. The grinding of barley and storing it in the dairy barn has been one of the major items of labor.

The Vocational Agriculture class from the Hillsdale Heights School visited the station September 30 to judge the dairy cattle and the class from the Burns High School were here October 1 for the same purpose.

Maximum temperature 72; minimum 34; precipitation, 1.41 inches.

AKRON:

The past week has been favorable for field work and reasonable progress has been made with current projects. Showers have been common over this general region, but it was not until Friday night that this station received a measurable quantity. A shower also fell Saturday morning with prospects for more before the close of the day. These showers are very welcome for the winter wheat and rye was either not emerged or making no progress because of the dry surface soil.

Akron, continued:

An inspection October first revealed from 70 to 100 per cent stands on all the rotation winter wheat plots except the corn-land plots which had not emerged.

Work of the week consisted of the completion of the harvesting of the rotation corn plots and of the harvesting of the general forage variety experiment. Two hundred pounds of bran was poisoned and scattered for grasshopper control. Beans on the rate and spacing corn project were threshed and very creditable yields obtained. The south plot of Great Northern beans situated on high land yielded at the rate of 16.7 bushels per acre. The north plot of Pinto Selection No. 27 situated on low land yielded at the rate of 27.9 bushels per acre. The remainder of the beans and soybeans were harvested. Squashes are being removed from the rate and spacing corn project to-day, October 4. The yield is so heavy that the men are questioning where to store them for the winter. There is one-tenth acre of Blue Sybils and one-tenth acre of Table Queens.

Dr. D. W. Robertson was down from the college this past week aiding with the counting of the winter wheat nursery.

Maximum temperature 82; minimum 39; precipitation, .36 inch.

NORTH PLATTE:

Rain amounting to 1.85 inches has occurred during the past two days. Frost is still holding off.

Corn has matured in good shape and unless severe freezing occurs soon, a good supply of seed should be available.

Winter wheat seeded September 20 had emerged with good stands by September 28 on fallow and early plowing. On late plowing, the stands were still very light on October 2. The recent rains will doubtless complete germination but owing to the late start wheat on this preparation will not be in as good condition to withstand winter injury.

COLBY:

The weather has been showery and somewhat cool most of the week. No precipitation fell to speak of, however, until last night and to-day when we received over an inch of water. The rain came in several intermittant showers and all of it soaked into the soil. The surface soil had become so dry that the wheat sown in the last two weeks did not germinate, and a rain such as this was just what was needed. There has been no frost as yet.

The corn on the rotations was cut the fore part of the week. It was all well matured, and practically all the leaves and stalks were dry. The feterita, milo, and kafir on the rotations are beginning to mature so that if frost holds off a week or so they will yield considerable grain.

Maximum temperature 82; minimum 42; precipitation, 1.55 inches.
Precipitation for September, .73 inch; 43-year average, 1.59 inches.

GARDEN CITY:

Wheat seeding was finished on the dry land station last Tuesday with the exception of seeding in the wide spaced rotations. F. and G. corn plots were cut Friday, October 3. Most of the milo is ready to cut. Kafir will not do to harvest until frost. The late rains have started second growth and it is still heading.

Soil moisture samples taken on the MC wheat plots at seeding time showed a pronounced lack of moisture below the second foot. The fallow plot had a fair amount of moisture for the entire six feet. All others were very dry below the third foot.

Many of the milo plots that have only produced grain on the borders will be cut with a mowing machine and the stover weighed. A few kafir plots are also total failures and will be mowed.

Maximum temperature 81; minimum 47; precipitation, .92 inch.

HAYS:

Seeding of winter wheat plots was finished Thursday forenoon. Generally, the soil was in very good condition for drilling except that the top soil on some plots had dried out so that it was about all the ordinary disk drill could do to put the seed into moist soil. Because of this condition it appeared the furrow drill had considerable advantage over the ordinary drill. However, with a .55 inch rain October 3 and 1.42 inches to-day, October 4, most of which fell gently, there is no reason why a good stand should not result from all drills used.

Feed crops, the sorghums, are continuing to mature seed beyond expectations. Should frost hold off ten days and warm weather prevail during that time some very good yields of sorghums will be harvested.

The rains of yesterday and to-day caught the experiment station with little more than 200 acres of alfalfa and sorghum hay in the swath. It is not ideal weather for curing hay.

Work has been started on the construction of a new office building to replace the general office which has long since become too small for the needs of the station. The new building is to be brick, 43 by 50 feet, two stories and full basement. It is being built immediately west of the old office building which will be razed as soon as the new one is ready to occupy.

TUCUMCARI:

The week has been generally cool, cloudy, and rainy, although only .41 inch has been recorded. Showers were recorded on three days, while near-by localitites have had very heavy, torrential rains.

Station work has included fence building, road work, counting of stalks, harvesting of broadcast sorgo, and the hauling of Sudan and cowpeas.

Tucumcari, continued:

Milo is nearly ripe and will not be benefited by the precipitation of this week. Kafir is largely in the dough stage and if warm weather occurs for ten days no doubt the grain yield will be considerably increased. The past month milo has ripened normally, although under droughty conditions. Kafir has developed but slightly under these adverse conditions and all D. L. A. and variety plots are still somewhat immature.

With precipitation of only 9.33 inches, the period January to September was the third driest on record for the first nine months of the year. Fall precipitation in 1929 was considerably lower than normal, with a total for the year October 1, 1929 to September 30, 1930 only 11.42 inches, compared with a long-time average annual of 17.17 inches.

Maximum temperature 89; minimum 44; wind velocity, 5.4 miles per hour.

BIG SPRING:

Weather conditions have changed considerably during the past week. A shower consisting of .25 inch fell on September 28, and ever since the temperature has been rather moderate. Another attempt to rain was made last night, but only .37 inch was received.

The cotton varieties and dates of planting of cotton were picked over for the second time. Some cane, which was so short that it was necessary to mow, was shocked, and some Sumac seed was selected during the week. Other work has consisted of heading milo plots in the rotations and hauling trash from the grounds.

Maximum temperature 77; minimum 48; precipitation, .62 inch.

LAWTON:

The September showers from the 8th to the 14th amounting to 1.7 inches were effective to farm operations for only a comparatively short time. Soils that were sapped of moisture and parched throughout the long, hot, dry summer were not sufficiently restored with moisture to permit much fall seeding during the latter half of September. Dry weather continued without interruption until October 4, when a gently falling rain that continued for more than 48 hours amounted to 3.34 inches. Almost all of this rain was absorbed by the soil, especially where it was tilled. Reports covering the southwestern part of the state indicate that this rain was very general.

Lawton, continued:

Approximately one-half of the wheat acreage in Comanche County has been seeded. Some of it was up and showing an acute need of moisture, and a good deal of it was "dusted in". Most of the farmers are now in position to secure some badly needed wheat and barley pasture. The winter barley acreage, however, is not large, due to the scarcity and the high price of seed.

Cotton opened very rapidly during the latter half of September, and farmers took full advantage of the dry weather during that period to harvest as much as possible of the crop. The average upland cotton field is producing about one bale on 12 to 15 acres. The fiber is weak and of inferior quality. On some of the creek bottom farms the yield sometimes runs as high as ¼ to ½ bale per acre, but such yields are the exception this year.

Cotton picking on the station was pretty well completed by the last of September. Only a few late maturing bolls on most of the plots remain to be picked. The remainder will be picked the next few weeks. The current yields are the lowest since 1918.

Winter barley seeded September 18 was up to a good stand on the 23rd, but the second seeding made on the 25th showed only about 50 per cent of a stand October 2. The first seeding date of the winter oats variety test was made September 27. Good stands should result under present conditions.

About 10 acres of alfalfa seeded September 16 resulted in less than 50 per cent of a stand. Germination and emergence of this seeding should not be rapidly completed, and there is yet a fair chance to get the crop established before freezing weather.

Temperatures since the middle of September, with the exception of one date, the 25th, when the maximum was 99, have been quite seasonable. The maximum temperature of 99 dropped very quickly to a minimum of 45 accompanied by a north wind of high velocity. Damage from soil blowing was reported from a good many western points in the state, but no damage of consequence occurred near the station.

The September precipitation of 1.70 inches was 1.45 inches below normal. From January to September inclusive, there were only two months that were not deficient in rainfall.

OCT 1930

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 11 1930

REPORT FOR THE WEEK ENDING OCTOBER 17, 1930.

JUDITH BASIN:

The weather during the past week has been cloudy with some rain every day and considerable snow during the last two days. The moisture will be of great benefit to winter wheat some of which had begun to suffer from lack of moisture.

Work on the station consisted of doing odd jobs about the place in preparation for winter. The painting which was started a week ago has been delayed by rains.

Maximum temperature 60; minimum 31; precipitation, 1.11 inches.

HUNTLEY:

Rain has been received every day of the past week. In fact, with the exception of October 1, precipitation has been recorded every day of the month to date, making a total of 1.13 inches for the 11 days. The average precipitation for October at this station is 1.11 inches.

Winter wheat and rye that has come up is making a good growth but all plots look patchy due to the uneven germination and seedling growth. The stands on fallowed land are fair but on cornland, beanland and after small grains the stands are thin. Volunteer grain is thick on many of the plots. As yet there has been no frost severe enough to kill the Russian thistles which continue to make a luxurious growth in uncultivated stubble land.

Maximum temperature 68; minimum 39; precipitation, .90 inch.

SHERIDAN: (Report for Two Weeks Ending October 11, 1930.)

Beginning with October 1 there was a decided change in weather conditions as compared with the preceding several months. Light showers occurred during the first few days of the month and have continued intermittently since, with a total of 1.35 inches of precipitation for the month to date. Moisture penetrated stubble land to a depth of from 3 to 6 inches. The weather continues warm, however, for unsettled weather at this time of the year.

Sheridan, continued:

Plowing was made possible by the rain and more fall plowing was done. Other work has consisted principally in cleaning grain and hauling shale on to the road leading to the main highway.

Precipitation for September was .03 inch, the lightest for any one month recorded at this station, except for one winter month when some of the precipitation probably was lost because of drifting snow. For the growing season, from April 1 to August 31, there was 5.20 inches of precipitation, 4.11 inches below the average for the station and 1.06 inches above the low record in 1919.

For week ending October 4, 1930:
Maximum temperature 84; minimum 31; precipitation, .89 inch.
For week ending October 11, 1930:
Maximum temperature 76; minimum 39; precipitation, .47 inch.

MANDAN:

Agronomy

Rain has fallen on six of the past seven days. The largest amount in a 24-hour period was .78 of an inch.

No field work was done during the week. Corn is now so wet that it will require several days of drying weather before it can be husked.

The fall is most favorable for the growth of fall sown grains. Weeds that start in the fall are also making a good growth. There is a heavy growth of peppergrass; no doubt the worst in the history of the station.
Maximum temperature 71; minimum 34; precipitation, .89 inch.

Cooperative Grazing Experiment

With the cool, wet weather the chances of the cattle finishing up the season with normal gains are greatly reduced. The cattle on the larger pastures are no doubt about holding their weight.

Mandan, continued:

Arboriculture

Plowing of nursery tree stock has been completed during the week. The pulling of Northwest poplar stock commenced the middle of the week.

Horticulture

Most of the vegetables have now been harvested. There remains in the field yet such hardy subjects as celery, rutabagas, parsnips, late cabbage, and cauliflower. There was a fair to good yield during the past season of all vegetables with the exception of beans. These were a total failure, both string and shell. The fall months this year seem to have been especially favorable to celery. Varieties dug so far are of the best quality ever raised at the station.

The fall work on the grounds has consisted of digging and storing of cannas, making cuttings of geraniums and colens, digging over and manuring of the beds, etc. The lawns are still emerald green and with the unusually brilliant fall coloring of shrubs and trees, the grounds are very attractive. Tartarian maple, golden currant, sumac, red osier, and highbush cranberry, are especially noticeable for color effects.

Considerable work has been spent the past week in grubbing out a number of the oldest apple and crab trees in the topworking experiment. These were so badly injured by blight as to be worthless for trials.

The City has completed a water line under the Heart River, connecting up the City water system with the station pipes, and replacing the old overhead pipes. It is hoped this will insure continuous water service throughout the year.

Mr. C. G. Bates, University Farm, St. Paul; Mr. F. E. Cobb, Forestry Station, Bottineau, North Dakota, and Professor N. N. Kuleshove, Institute of Applied Botany, Petrograd, Russia, were visitors during the week.

BELLE FOURCHE:

The drizzling rain which commenced October 2 terminated October 5, and a total of .83 inch precipitation was received. Several days of clear, warm weather followed the rain, but a fine mist has fallen almost continuously during the last two days of the week. The amount of precipitation received, however, was very small.

Winter wheat and winter rye are just beginning to come up on the plots which were too dry for the seed to germinated until last week's rain was received. Alfalfa and sweet clover have resumed growth, and all 1930 seedings survived the summer drought with perfect stands.

Work in the field has been devoted to the husking of corn, and husking of all but three of the plots has been completed. Weights of grain from the husked plots have been obtained, but not any of the stover has been weighed.

Maximum temperature 77; minimum 40; precipitation, .26 inch.

ARDMORE:

The whole week was too wet for field work due to the rains of the previous week. Only one small shower fell this week, though there were several cloudy and misty days.

The steers were shipped to Omaha on October 11. Exchange for yearling steers will be made in the usual way. The steers averaged 875 pounds in weight at the end of the pasture period.

Bean varieties remain too wet to thresh. Beans, sorgo, and potatoes are the only crops remaining in the field. It will be some time yet before potatoes can be dug or beans threshed.

Maximum temperature 81; minimum 40; precipitation, .06 inch.

The total rainfall for October to date, 2.90 inches.

ARCHER:

The weather has been warm, humid and at times rainy. Precipitation was recorded on five days during the week. The measurable amounts, .18 and .27 of an inch, occurred during the nights of October 5 and 10, respectively. This makes a total of 1.86 inches to date in October.

These conditions hindered field work. During the fore part of the week the work consisted of hauling gravel on the roadway, repairing the well pump and working in the granary. To-day, October 11, the fields are too wet for work; therefore, some of the minor buildings are being moved and remodeled. Field work consisted of digging potatoes and seeding winter wheat in the dairy field.

Mr. J. S. Wiant, Plant Pathologist of the University of Wyoming, and Mr. Park Smith, Manager of the Warren Livestock ranches, were station visitors October 10.

Maximum temperature 71; minimum 38; precipitation, .45 inch.

COLBY:

We are now having the heaviest rain we have had since July 1914. It began raining early Friday evening and has been raining at intervals now for nearly 24 hours. Over three inches of water has fallen and the end does not appear to be in sight yet. While all the moisture has fallen in rather easy showers, there has been a lot of run-off. Rather damp but pleasant weather prevailed the forepart of the week.

The winter wheat and rye plots that did not come up on account of the dry surface soil at seeding time are all up now. The kafir, milo, and feterita are maturing nicely. All will produce a fair amount of grain, even if a killing frost should come now, following the rain.

Director Call and Professor Laude, of Manhattan, Mr. Swanson, Cerealist at Hays, and Mr. Beebe, of the Hays Wheat Farming Corporation, visited the station Thursday. Miss Marian Talley, the opera star, who is here looking after her extensive land holdings, visited the station Wednesday.

Maximum temperature 81; minimum 43.

Precipitation, up to 6 p.m., October 11, 3.47 inches.

GARDEN CITY:

Most of the milo plots were cut the past week with a mower. There was no grain in the plots and very little around the borders. They were a total failure. The stover will be weighed after curing in the field. Some kafir plots that had produced no grain were also cut.

Rye for green manure was seeded in the rotations on Friday, October 10. The rotations that had wide spaced row crops on them were seeded to wheat on the above date.

Most of the week it has been too wet to do any field work. A heavy rain on the 4th, amounting to 2.65 inches, thoroughly soaked the ground. Run-off was very heavy and some washing to roadways was done. Again on the 10th, 1.30 inches fell, which further soaked the ground and did some damage to roadways and plot edges. A total of 4.45 inches has fallen the past week. 4.87 inches has fallen since October 1.

Maximum temperature 87; minimum 45.

HAYS:

A heavy rain, 2.10 inches, last Saturday night following 1.97 inches which fell Thursday and Friday preceding (reported last week) thoroughly soaked the ground so that it is still too wet for any tillage work. During the week it has been, for most part, cloudy, damp and cool. A rain of .07 inch fell last night, October 10.

The station has been unable to put up any of the 200 acres of hay reported cut last week, as it has been anything but hay-curing weather. There have been no frost temperatures, but too cool for rapid development of sorghums. However, these crops are filling and slowly maturing.

Rye sown for green manure is making good growth. Winter wheat is all up to a good stand on all early and well prepared plots, and looks fine. On the late plowed plots it came unevenly, and is thin, but more wheat is coming. Where the wheat was sown on wheat stubble, or burned wheat stubble ground without tillage previous to drilling, and where drilled in kafir stalk ground, it is just coming up. On disked kafir and sorgo stubble land it was

Hays, continued:

slower germinating than on early prepared wheat stubble land but better than where drilled in kafir stalks or in wheat stubble without previous tillage.

In some localities false wire worms have damaged the stand of wheat.

TUCUMCARI:

The week has been cool and rainy, with total precipitation of 1.51 inches, and a total of 1.79 inches for the month to date. Hail which demolished late beans and greatly injured sorghums has been reported from various localities in the county.

Station work has consisted of cutting broadcast sorgo, working on roads, cutting of M.C. sorgo and several variety forage sorghum and broomcorn plots, heading of a few D.L.A. milo plots, and running levels for tree rows.

The majority of rotation milo plots were nearly ready for heading, while rotation kafir plots were practically ripe enough to bind before the rains of the past two days. A protracted rainy period at this time will be of no benefit to row crops, but may delay harvest considerably.

Mr. E. F. Chilcott, of the Woodward Station, visited Tucumcari Tuesday.

Maximum temperature 85; minimum 49.

DALHART:

For the second Saturday in succession the station is isolated from Dalhart because of the high water in the canyon. Last Friday and Saturday a week ago the canyon ran from five to twelve feet deep. This was caused by rains in New Mexico. Yesterday, October 10, at 3:45 p.m., it started to rain here and a series of hard showers have fallen intermittently but regularily since then. At five o'clock this evening it is clearing up and apparently the rain is over. During this period of 25 hours a total of 5.71 inches

Dalhart, continued:

of rain has fallen. There has been a high run-off and the canyon is again running 5 to 6 feet deep. This deluge brought our recorded October rainfall for 1930 to 6.41 inches which is the largest amount of rainfall ever recorded here for that month. It naturally follows that our annual rainfall has also taken a decided boost.

The sorghums are probably as mature now as they will get. Most of the sorghums in the variety test for the first two dates were harvested. It was planned to start on the rotation milo plots the first of the week. Kafir is maturing very ununiformly. Rye seeded a week ago is emerging. Winter wheat varieties are up to a good stand. Rye seeded in tree plantings the first of this week is emerging.

Cowpeas are still in the shock and it is probably going to be hard to get a satisfactory weight on them now.

Cotton was picked for the first time during the week. Cotton yields are going to be much higher than normal.

No temperatures low enough for frost have been recorded as yet.

BIG SPRING:

Cool, cloudy weather has prevailed during the entire week, with a slow drizzling rain falling on the first two days. Wheat was seeded in the orchard, vineyard, and roadways to prevent soil blowing, but it is doubtful if there is enough moisture to bring it up.

During the time that it was too wet for field work, a new platform was put on the scales and some sewer lines were repaired. Other work has consisted mainly of heading milo plots in the rotations and dates. Some sumac plots were also harvested.

Maximum temperature 86; minimum 50; precipitation, .37 inch.

OCT 2 0 1930
PLANT INDUS

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 13 1930

REPORT FOR THE WEEK ENDING OCTOBER 18, 1930.

JUDITH BASIN:

The weather during the greater part of the week has been unseasonably cold with some snow. On October 15 and 16 a high wind prevailed which made the cold weather very disagreeable. Since Wednesday, October 15, the maximum temperature has been 19 degrees and the minimum 4 degrees. The sudden change caught many farmers and stockmen unprepared and livestock on pastures suffered somewhat from the cold.

Work consisted of cleaning seed grain, building feed racks, hauling feed and during the last two days of the week the winter supply of coal for the station was hauled. The hogs from the experimental pastures were sold after having been fed for a month on ground wheat.

Maximum temperature 57; minimum 4; precipitation, .25 inch.

HUNTLEY:

Snow has succeeded rain as a form of precipitation during the last three days. The first hard freeze of the season occurred on the morning of October 16. The snow and freeze caught most of the trees and shrubbery still in full leaf and some slight damage was done through the breaking down of snow laden branches.

Field work has remained at a standstill as the land is still too wet for teams. Except for hauling in fodder and cleaning up the fields for the winter little remains to be done on the dry-land project but on the irrigated portion of the station beet harvest and fall plowing are still uncompleted.

Something over 300 lambs were unloaded at the station yesterday for use in the winter feeding experiments which will be conducted along much the same lines as were followed last year.

Maximum temperature 63; minimum 18; precipitation, .54 inch.

SHERIDAN:

The first of the week was fair and the most of the plowing on the station that can be done in the fall was completed. The last four days, however, have been quite cold with light snow at intervals. The snow that fell the 15th is still on the ground. Potatoes dug last week were sorted and weighed and put in the cellar. Other station work has consisted principally in taking care of livestock.

Maximum temperature 60; minimum 8; precipitation, .10 inch.

DICKINSON:

A rain of .76 inch the first of the week was followed by mild temperatures until the 15th when a cold wave struck with high winds for three days. The first snow of the season fell on the 12th.

Corn on the rotations was weighed on the 14th and 15th. Samples were kept for drying as a basis for figuring final yields. The best yield of grain will be about 25 bushels on fallow, MC-C. Several plots produced very little grain and only a light yield of fodder.

Most of the large Siberian crab trees in the orchard were pulled to permit use of the land for improved varieties of fruit.

Grasses, winter grains and volunteer grains remained green until the night of the 15th when the temperature dropped to 15 degrees.

Visitors included Mr. W. J. Church, of the State Board of Administration, and Senator Kretchmar and Representative Peters, of the budget board of the North Dakota Legislature.

Maximum temperature 57; minimum 10; precipitation, .81 inch.

ARCHER:

The weather to date in October has been rather cool and wet with 2.30 inches of precipitation which is more than four times the 17-year average. To date there have been 11 days during which precipitation has been recorded. The precipitation during the week amounted to .44 of an inch. This came during the nights of October 11 and 13. During the night of October 15 the first severe frost occurred and killed most of the live vegetation.

Archer, continued:

Conditions during the month have been favorable for winter cereals which have made a very good growth. Notwithstanding the wet weather most of the grasses have cured in good shape.

Work at the station has consisted of digging potatoes, making a coal bin for the milk house coal and moving the coal into it. Considerable corn was picked from the field during October 17 and 18.

Maximum temperature 57; minimum 18; precipitation, .44 inch.

NORTH PLATTE:

The first killing frost of the fall occurred on October 15, with a minimum temperature of 26 degrees. Snow covered the ground on the same night and below freezing temperatures have prevailed each night up to the present. The frost free period was 150 days in length.

Precipitation totaling 4.14 inches for the month to date sets a new high record for October. The highest previous record at the station was 3.09 inches in 1913. The highest record at the North Platte Weather Bureau was 4.11 inches in 1897.

Work during the week has included the topping of milo on the rotations, harvest of sorghum varieties, completion of the potato harvest and husking corn from plots where stalks are left on field.

COLBY:

The forepart of the week was rainy, and the last three days have been clear and cold. The heavy rain that started a week ago Friday evening lasted until Saturday night. The total precipitation was 3.80 inches, the heaviest ever recorded at this station in a similar period. Another shower amounting to .16 inch fell Wednesday night. This brings the total precipitation for October, 1930 to 5.51 inches, .01 inch more than the previous high record for the month, which was 5.50 inches in 1897.

Colby, continued:

The temperature dropped to 32 on the morning of the 17th, but there was no evidence of frost. On the morning of the 18th the minimum was 30 and there was an abundance of hoar frost on everything. By afternoon all vegetation showed the effects of the freeze. This is 12 days later than the average date of the first killing frost, but four days earlier than last year.

The fields have been very wet all week so that it has been almost impossible to do any tillage work. Sorghum cutting was possible only by hitching the Caterpillar to the corn binder. The feterita, kafir and 12 of the milo plots were cut to-day. The feterita was practically mature, as were also four of the plots of milo. The rest of the milo was from two-thirds to three-fourths mature. The kafir was not quite ripe.

Maximum temperature 71; minimum 30; precipitation, 2.28 inches.

GARDEN CITY:

Most of the kafir and milo were cut the past week. It is not mature and is not making any further development. Nights have been cool, weather cloudy and not favorable to the maturity and development of late growing sorghums. We have not had any frost yet, but it can be expected at any time.

The instrument shelter was moved on Thursday to a new location, closer to the office and on ground very poor for experimental work. This makes available four plots of ground in the center of the project for experimental use.

Some brush and rock dams were put in to prevent erosion of roadways. All wheat on the project is up to a good stand and is making excellent growth. The soil is well supplied with abundance of moisture down three feet or more. A total of 7.04 inches of rain has fallen since October 1, 5.91 inches more than the normal October rainfall.

Maximum temperature 74; minimum 37; precipitation, .12 inch.

TUCUMCARI:

Torrential rains throughout this locality the past two weeks have torn up roads and bridges, washed fields, and in many cases practically destroyed crops. Fortunately, while precipitation fell at the station on ten of the first fifteen days of the month, the total was only 2.37 inches and no damage occurred. Harvesting has been possible only the last four days of the week, but field work is now in such shape that completion of harvesting can be performed in less than two days, at any time frost occurs.

Early in the week levels were run and sod strips plowed preparatory to planting trees next spring. The past four days some eighty plots have been headed, all remaining rotation kafir plots harvested, all peanuts harvested, and corn plots devoted to Southwestern Stalk Borer studies cut and shocked. Today, a number of cowpea plots, which were mowed during the drought and which have made considerable second growth, are being harvested.

Maximum temperature 73; minimum 39; precipitation, .58 inch.

BIG SPRING:

Another rainy spell delayed field work during the first two days of the week. Although only .70 inch of rain was received, it was enough to delay field work.

Cotton picking has continued when weather would permit. During this time all cotton in the rotation field was picked over for the second and probably the last time. The cotton picking season this year will be unusually short, because the hot, dry weather during late September caused cotton to open very fast.

Other work has consisted of seeding the winter wheat plots and selecting milo for seed.

Maximum temperature 85; minimum 43; precipitation, .70 inch.

MANDAN:

Agronomy

Weather the past week has varied greatly. The week opened with rain and ended with several days of high wind and unusually low temperatures for this period of October.

A little snow fell on two days. On the afternoon of the 15th the weather turned colder with a high wind. The wind averaged 17.1 miles per hour for 72 hours, On the 17th, the wind averaged 20.8 miles per hour for 24 hours, and 31.1 miles per hour for 9 hours during the day. This is the highest velocity recorded at this station during October. The three days were also the highest for a similar period in October. The wind has gone down somewhat to-day. No field work was done during the week.

Maximum temperature 64; minimum 13; precipitation, .62 inch.

Cooperative Grazing Experiment

The final weighing of the steers should have been completed this week. The high wind and cold weather made it impossible to weigh. One weighing was made which showed that the cattle had made light gains for the month.

The steers have lost rapidly the past few days and would no doubt show a heavy shrinkage to-day. The cattle will be shipped to the Agricultural College at Fargo, North Dakota, next week.

Arboriculture

The pulling of nursery tree stock was continued during the first half of the week. The freezing up of the surface of the ground during the latter half of the week has prevented further pulling.

Northwest poplar whips for making cuttings have been taken from the cutting block in field L.

Mandan, continued:

Horticulture

A number of trees were pulled out during the week, including all trees in the 1918 Combination Fruit Patch and in the west coulee orchard.

Seeds and cuttings have been planted in the seed-beds.

The ground is frozen enough so that it is impossible to dig potatoes and nursery stock at the present time.

ARDMORE:

Rains on October 11 and 12 brought the total for the month up to 3.57 inches. The first severe freeze of the season occurred on the night of October 15 when the temperature fell to 20 degrees. Since that time the weather has been almost continuously cloudy and cold. There has been very little rain or snow.

Crops in the field are drying very slowly. Beans are still too damp to thresh, and only a small amount of the sorgo is dry. The sorgo plots were hauled during the week, and some of the varieties were hauled. The dry weight of the plots ranged from 1900 to 4400 pounds per acre. The soil dried off enough during the latter part of the week to permit potato digging.

All fall plowing except the garden is completed, and the garden is being manured preparatory to plowing.

The steers were shipped to Omaha on October 11. They were in fairly good condition.

Maximum temperature 67; minimum 18; precipitation, .73 inch.

LAWTON:

Heavy rains, soils that were previously saturated with water and prevailing cloudy, threatening weather have pretty generally held farm work at a stand-still since the first of October.

Precipitation from October 4 to 14 inclusive amounted to 9.18 inches. A rain of 5.04 inches of the total amount was recorded October 12. This rain fell rather rapidly on soils that were already filled with water and produced lots of erosion in many places.

Wheat and barley on the rotation plots were seeded October 10 on land that was almost too heavy and wet to work. Germination was quite rapid and emergence of good stands were recorded October 16. Seeding of the wheat variety test, winter barley variety test, later date seedings of winter barley and winter oats, cannot be made until the soil becomes drier. A good deal of wheat remains to be seeded on the farms in this part of the state and most farmers are also anxiously waiting for fields to dry sufficiently to permit pasturing of fields that were seeded early in the fall.

Fall seeding of increase fields of alfalfa look quite promising at present, and the crop stands a fairly good chance of becoming sufficiently established to withstand the winter freezes.

Cotton picking has been out of the question almost wholly throughout the month to date. The burrs are now pretty well rotted and snapping will be the almost universal practice the remainder of the season.

The minimum temperature for the season to date is 38 degrees. A light frost was reported on low land October 18, but it was too light to be effective.

BELLE FOURCHE:

The first severe freeze this fall occurred the latter part of the week, when a strong, cold wind prevailed for three days and daily minimum temperatures ranging from 17 to 24 were recorded. Leaves of deciduous trees and shrubbery, and the top growth of all field crops, except fall grain, were killed by the low temperatures. Considerable damage was also done to unharvested potatoes, about 10 per cent of the tubers were frozen.

A rain of .40 inch precipitation was received the first day of the week and traces of rain were recorded each of the following four days. Precipitation has occurred every day, except two, since the first of the month, but in most instances the amount received in a 24-hour period was very small. A total of 1.37 inches precipitation has been received to date since the first of October, which is .12 inch greater than the average precipitation for the full month of October.

Several days of warm weather are needed to bring the remainder of the winter wheat up on the continuously cropped plots. Fall grain has emerged with perfect stands on all other plots.

Husking of corn was completed, and the yields of air dry grain will range from approximately 1 to 25 bushels to the acre. The average yield will be about 7.5 bushels per acre.

Maximum temperature 63; minimum 17; precipitation, .42 inch.

1.9
P696
Reserve

LIBRARY
RECEIVED 1930
SEP 25 1946
U. S. DEPT. OF AGRICULTURE

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 25 1929

REPORT FOR THE WEEK ENDING OCTOBER 25, 1930.

JUDITH BASIN:

The snowstorm which was reported last week continued through Sunday, October 19, with a total fall of about eight inches. The snow was very wet and together with the moisture which fell earlier in the month has made conditions almost ideal for winter wheat. Warm weather, with considerable sunshine since October 20, has melted practically all of the snow. However, fields and roads are still very muddy.

The stands of trees in the conifer shelter-belt were counted during the week. The heights of the trees were also measured. The different plantings of spruce, Canadian white, Black Hills and Colorado blue, have withstood the extreme drought of the past two summers remarkably well. The stands of these trees are now 100 per cent and they have made a good growth during the past two years. The different species of pine have not been as satisfactory as the spruce. The stands of Scotch pine, Jack pine and Red or Norway pine this fall are 81, 75 and 76 per cent, respectively. The red or Norway pine were all replanted last spring, while considerable replanting of the Scotch and Jack pine was also done. About 40 per cent of the Western Yellow pine, which were planted for the first time this year, survived.

Maximum temperature 60; minimum 6; precipitation, .41 inch.

HUNTLEY:

Three weeks of almost daily precipitation was terminated October 21, which was the first day of clear weather received this month. Since then rain has threatened at various times but none has fallen. Until the last two nights, hard frosts have been received which with the seasonably cool weather and almost no wind has retarded the drying up of the surface soil so that the land is still too wet to permit any work in the fields.

The hard freezes of the past week have killed most of the weeds and more tender volunteer grains as well as the foliage of trees and shrubbery which had remained green.

Huntley, continued:

Winter rye has made a noticeable growth during the week. Winter wheat is still very backward. The thickest stands appear to be on summer fallowed plots but even these could be rated as only fair. The stands on beanland have improved somewhat but on other seedbeds the wheat is very thin and unsatisfactory. Investigation has shown that the moisture of the past three weeks has penetrated below the depth of seeding and much of the seed has germinated but needs a period of warm weather to bring it up. As yet none of the grain has reached therosette stage. Farmers on the lighter soils report their winter wheat as having made a good growth since the storm period.

Maximum temperature 63; minimum 14; precipitation, .43 inch.

MANDAN:

Agronomy

The past week has been more favorable in regards to temperatures, especially the latter part. The temperature dropped to the lowest point so far this fall early in the week, but it is now warmer. No field work was done during the week.

Maximum temperature 63; minimum 10; precipitation, trace.

Cooperative Grazing Experiment

The steers used in the grazing work the past season were shipped to the Agricultural College at Fargo on October 21. Part of the cattle were sold at the packing plant, and 20 head were kept at the college for a feeding experiment on different kinds of silage.

The steers shrunk about 33 pounds per head during the cold spell between the final pasture weight and the day before they were shipped.

The following gains were made by the different lots during 20 days in October, and for the season:

Mandan, continued:

Cooperative Grazing Experiment, continued.

Pasture	No. of steers	Gain per head (lbs) October	150 days
100 acres	10	15.5	300.5
70 "	10	14.5	307.0
50 "	10	53.0 *	201.0
30 "	10	3.5 **	222.5
Rot. 70 acres	14	6.8	213.2
Brome 25 acres	8	22.5 ***	289.4
Brome 10 "	5	33.0 ****	192.0

* On large reserve 20 days. ** On large reserve 50 days.
*** On small reserve 20 days. **** On large reserve 20 days.

The steers in the 100 and 70-acre pastures made normal gains for the season. The gains in the rotation pasture were about 60 pounds per head below normal. The cattle had to graze a short pasture for too long a period this year. All pastures were grazed down more than normal.

Arboriculture

The below freezing temperatures which kept the ground frozen prevented tree pulling until the latter part of the week.

Mr. J. A. Munroe, State Entomologist of Fargo, North Dakota, arrived on the 24th to inspect and fumigate the nursery stock which had been pulled. All stock is being heeled in as fast as fumigation takes place.

Horticulture

With the thawing of the ground tree pulling in the nursery and field has been resumed. Nursery material is being heeled-in for the winter, and buds and grapes are being covered with soil for protection. Most of the seeds and hardwood cuttings have been planted.

ARCHER:

The weather was cool and foggy during October 20 and 21. The remainder of the week has been clear and pleasant.

Work at the station consisted of husking corn, sorting and storing potatoes, plowing Dry Land plots, threshing the flax and millet plots and grading the road to the Lincoln Highway. To-day, October 25, the husking of corn is in progress.

County Agent E. O. Johnson visited the station October 24.
Maximum temperature 67; minimum 23; precipitation, trace.

NORTH PLATTE:

The first half of the week was cold and cloudy with mist or drizzling rain. The sun finally broke through on Wednesday afternoon and clear skies have prevailed since.

Corn shredding on the D. L. A. plots was completed yesterday. Moisture tests have not been made or yields computed. The average yield will probably be about 30 bushels per acre or about 50 per cent above the long time average. The most outstanding results were the appreciably better yields from rotation receiving manure of any kind. Previous to this time, very little benefit from manure has been noticed.

COLBY:

The forepart of the week was misty and rainy with about an eighth of an inch of snow. The last three days have been clear and pleasant. Freezing temperatures have been recorded every day.

The cutting and shocking of the milo plots was finished.
Maximum temperature 69; minimum 28; precipitation, .03 inch.

GARDEN CITY:

All sorghum cutting was finished the past week on the dry land station. Wheat is making exceptional good growth for this time of the year. By cold weather a heavy top growth will completely cover the ground. Some early seeded fields on the county have growth enough to cover the ground and it is furnishing excellent pasture now.

The first hard, killing frost occurred the night of October 20. Four nights during the past week temperatures have been below freezing. Some plots of wheat were staked to-day in preparation for trimming.

Maximum temperature 66; minimum 29; precipitation, .08 inch.

TUCUMCARI:

Precipitation on five days this week totaled only .07 inch, but was sufficient to keep harvesting from progressing for four days, due to nearly continual mist. To-day the last of the broadcast increase sorgo was mowed, while all 1930 binding was also completed. Many of the plots in the late date of grain sorghum variety test were immature, so only five rows of each plot were bound. Frost is due, but if delayed for some time the remaining rows of each variety may reach approximate maturity. Heading of those plots which will not be cut is practically completed.

Row crops over the county are generally poor as the result of poor stands, summer drought, September hail in some localities, and torrential rains in October. Early sown wheat is in most instances very promising and will furnish a great amount of winter pasture.

Mr. B. F. Barnes, of Dalhart, Texas, spent two days at the station during the middle of the week.

Maximum temperature 72; minimum 35.

DALHART:

Weather conditions have remained favorable for field work except for one day. Field work accomplished during the week has consisted of heading of milo and kafir plots, heading a few nursery rows of sorghum, heading three increase fields of milo, heading of the second date of planting of the sorghum varieties, harvesting of peanuts, and cutting of all sorghum plots where the ground was sufficiently dry enough to permit harvesting. There still remains

Dalhart, continued:

about one day's work with the binder, and about a week's work heading sorghums that are not to be bound.

It was considered advisable to cut several of the kafir rotation plots before they were fully mature. It is felt that they will mature better in the bundle than if they had been permitted to be frosted. Just a few of the varieties on the third date were headed before the stalks were harvested. Most of these were fully mature when harvested.

To-day, October 25, the wind has helped dry the ground and the headed sorghums. Previous to to-day we have had but one day, and that last week, when the atmospheric conditions were favorable for ripening of sorghums and drying of the ground and headed sorghums.

There still remains a few increase plots and cover plots to seed to wheat and rye. Weather permitting this will be done on Monday.

A rather peculiar temperature condition has prevailed during the week. On Tuesday morning following a drizzling rain of the night before and early in the morning ice formed on the leaves of vegetation. No frost-bit damage was apparent. On Wednesday morning the temperature was again 31 with only a very light trace of frost evident and that on a few boards with free air circulation. On Friday morning, with a minimum recorded temperature of 35 degrees, the roofs of all buildings and all dry vegetation showed a rather thick coating of frost. No frost was noticed on green vegetation and no frost damage is now apparent.

Maximum temperature 70; minimum 31; precipitation, .16 inch.
Wind velocity, 5.0 miles per hour.

BIG SPRING:

Another cold, rainy spell has only permitted field work about half time during the past week. Only .72 inch of rain was received from two showers, but this was enough to delay field work.

Big Spring, continued:

Cotton picking throughout the county has been slowed considerably during the past month. During this time the weather has been such that only about half-time could be devoted to picking.

Winter wheat plots which were seeded last week are now up to good stands.

Milo stalks in the rotations were cut and shocked during the week. Other field work has consisted of heading milo in an increase field and picking cotton. During the rainy weather several odd jobs around the barn and feed lots were taken care of.
Maximum temperature 78; minimum 40; precipitation, .72 inch.

HAYS:

The weather during the first part of the week was a continuation of cloudy, damp, cool weather like which there has been much more than usual for October. Although there was a total precipitation of but .14 inch, the sun did not show itself until Thursday since when sunshine has prevailed. With the sunshine came higher daylight temperatures, the maximum for the week being 75. The minimum temperature was 28. One day the temperature did not go above 33.

The first killing frost occurred on the morning of the 18th since when the minimum temperatures have reached or gone below the freezing point every night except the 22nd when it was 33.

All uncut sorghums are killed and are now being harvested as rapidly as possible.

Winter rye is making a very good growth and nearly covers the ground at this time.

Winter wheat is also making a rank growth throughout this section. On many fields the ground is now covered and on occasional fields the volunteer is from four to six inches high and varies in thickness from scattering plants to that equal to a full stand or

Hays, continued:

more. It will be interesting to observe what happens to some of such fields. In many cases pasturing is being done to remedy the condition, or to improve it. Farmers having little or no livestock are advertising for livestock to pasture.

The unusual heavy rainfall during the past few weeks have added much moisture to the subsoil, some of which was dry about seeding time. But for these rains the prospect for another good wheat crop was not very bright. It is unfortunate now that there is so much heavy growth due principally to volunteer and early seeding on many fields. There is a good chance for the moisture in these fields to become exhausted early in the season and thereby reduce what would otherwise be an excellent prospect for a good crop.

Some ditch and repair work was done during the first part of the week. Several plots of kafir were headed during the last of the week. Drought during the summer so delayed the development of the pink kafir frost caught it on the plots ranging from bloom to fully mature stage. On account of the unevenness of maturity of stover it was decided to head all the plots before harvesting.

SHERIDAN:

The first few days of the week continued cold and cloudy but the remainder of the week was fair. Corn stover dried sufficiently so that weights were obtained on it from the rotations and a part of the other late forage crops. All seedings of fall grain made before the storm have emerged and made some growth during the week.

Maximum temperature 67; minimum 20; precipitation, .08 inch.